CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: Adopt resolution authorizing the City Manager to provide a Public Benefits Program Grant in the amount of $26,278.93 to fund the Lodi Unified School District Demand-side Management Project (EUD)

MEETING DATE: February 21, 2001

PREPARED BY: Electric Utility Director

RECOMMENDED ACTION: That the City Council adopt a resolution authorizing the City Manager to provide a Public Benefits Program Grant in the amount of $26,278.93 to fund the Lodi Unified School District Demand-side Management Project. The grant represents the standard 25% match from the Public Benefits Program Fund to a commercial/industrial customer.

BACKGROUND INFORMATION: The Lodi Unified School District has embarked upon a two-part demand-side management or energy efficiency improvement project. The first phase is already complete. This phase included: the installation of 36 high efficiency (12.0 Seasonal Energy Efficiency Rating or SEER) air conditioning and heating units at two school sites within the city limits of Lodi (Tokay High School and Needham School); these 36 air conditioning and heating units replaced aging and inefficient equipment (all with energy efficiency ratings at 10.0 SEER or below).

The second phase of the Lodi Unified School District demand-side management project will include: the extension or enhancement of the existing energy management system (otherwise known as an EMS) from the Lodi Unified School District Maintenance & Operations Center to five school sites within the city limits of Lodi (Tokay High School, Lodi High School, Lakewood School, Heritage School and Vinewood School).

The extension of the energy management system to the additional school sites will allow Lodi Unified School District personnel to effectively and efficiently monitor and control air conditioning and heating systems from a remote location. This upgrade reduces operations and maintenance expenses, while reducing energy consumption (with the EMS upgrades, new controls will regulate and shut off heating & cooling systems not needed based upon classroom or facility occupancy/vacancy or use) at those various school locations. Please note: the installation of the aforementioned equipment-both heating/cooling units and the energy management systems- was/is to be performed by Lodi Unified School District personnel.

After reviewing the two projects, it is estimated that Lodi Unified School District will save approximately 5 percent on their monthly electric utility costs at each school site, based upon the energy efficiency improvements implemented.

FUNDING: 164605 – Public Benefits Program Fund (Category – Demand-side Management)

Funding Approval: Vicky McAthie, Finance Director

Alan N. Vallow, Electric Utility Director

PREPARED BY: Rob Lechner, Manager of Customer Programs

ANV/RL/lst

APPROVED: Randall A. Hays for

H. Dixon Flynn - City Manager

Equipment Table

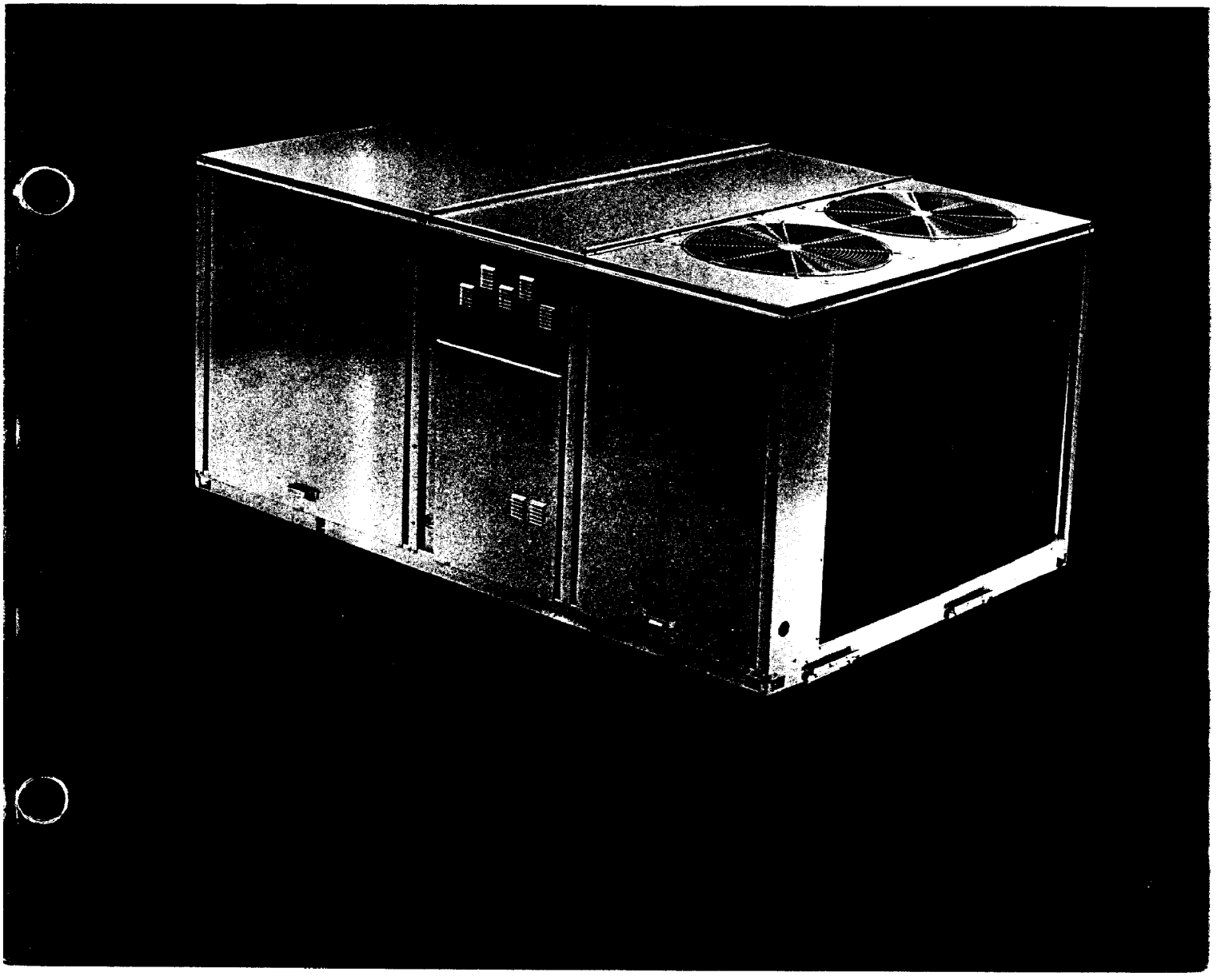
	Vendor	Job Name	Model #	Qty.	Unit Price	Total
2231218	Trane	Tokay Hi, Cafeteria	YCD037C4LAB	1		
			YCD049C4LAB	5		
			YCD061C4LAB	1		
			Lot price	1	15,631.72	15,631.72
1917391 2	York	Needham	D1HG048N06025BD	3	1,773.00	5,319.00
			D2EG036N04025	1	1,401.00	1,401.00
			D1HG048N09925BD	5	1,773.00	8,865.00
			Motorized ODA damper	1	186.00	186.00
			D1HG048N06025BD	3	1,773.00	5,319.00
1850638	York	Tokay Hi	D1HG060NO7946BD	1	2,020.00	2,020.00
			Economizer	1	305.00	305.00
1914640	York	Tokay Hi	D2EG036N04046	1	1,373.00	1,373.00
			D1HG060NO7946BD	1	2,020.00	2,020.00
			D1NH042N06546	1	1,508.00	1,508.00
			D1NH036N07246	1	1,382.00	1,382.00
			D1NH024N05606	1	1,034.00	1,034.00
			D1EH024A06	2	940.00	1,880.00
			D1EH036A25	1	1,060.00	1,060.00
			D1EH042A46	2	1,201.00	2,402.00
1648561	York	Tokay Hi	B1HH042A06	2	1,347.00	2,694.00
[redacted]						
1990346	York	Tokay Hi	D1HG060N07946BD	1	2,020.00	2,020.00
[redacted]						
			TOTALS	36		$56,419

TRANE

YC-D-7
September 1997

Packaged
Gas/Electric
Rooftop Units

Voyager™
3 through 25 Tons — 60 Hz



Model Number Description

PACKAGED GAS / ELECTRIC UNIT TYPICAL MODEL NOMENCLATURE

Y C D 0 9 0 C 3 L 0 A A

Product Type

YC = Packaged Gas/Electric

Airflow Configuration

D = Downflow
H = Horizontal

Nominal Gross Cooling Capacity (MBh)

036 = 3 Tons Standard Efficiency
037 = 3 Tons High Efficiency
048 = 4 Tons Standard Efficiency
049 = 4 Tons High Efficiency
060 = 5 Tons Standard Efficiency
061 = 5 Tons High Efficiency
074 = 6 Tons High Efficiency
075 = 6¼ Tons Standard Efficiency
086 = 7 Tons High Efficiency
090 = 7½ Tons Standard Efficiency
091 = 7½ Tons High Efficiency
102 = 8½ Tons Standard Efficiency
103 = 8½ Tons High Efficiency
120 = 10 Tons Standard Efficiency
121 = 10 Tons High Efficiency
150 = 12½ Tons Standard Efficiency
151 = 12½ Tons High Efficiency
180 = 15 Tons Standard Efficiency
181 = 15 Tons High Efficiency
210 = 17½ Tons Standard Efficiency
211 = 17½ Tons High Efficiency
240 = 20 Tons Standard Efficiency
241 = 20 Tons High Efficiency
300 = 25 Tons Standard Efficiency
301 = 25 Tons High Efficiency

Major Development Sequence

Electrical Characteristics

1 = 208-230/60/1
3 = 208-230/60/3
4 = 460/60/3
W = 575/60/3

Heating Capacity

L = Low Heat
M = Medium Heat
H = High Heat

Factory-Installed Options

Examples:
0 = Packed Stock, No Options
A = Downflow Economizer
B = Oversize Motor
C = Downflow Economizer and Oversize Motor
F = TCI*
G = Downflow Economizer and TCI*

Minor Design Sequence

Service Digit

*TCI - Trane Communication Interface

General Data

5, 6 Ton

High Efficiency

Table 16-1 General Data

	5 Ton Downflow and Horizontal Units YC*061C3,C4		6 Ton Downflow and Horizontal Units YC*074C3,C4	
Cooling Performance[1]				
Gross Cooling Capacity	60,500		72,000	
SEER / EER[2]	12.00 / —		— / 10.00	
Nominal CFM / ARI Rated CFM	2,000 / 2,000		2,500 / 2,188	
ARI Net Cooling Capacity	58,000		68,000	
System Power (KW)	5.38		6.80	
Heating Performance[3]				
Heating Models	Low	High	Low	High
Heating Input (Btuh)	90,000	120,000	120,000	205,000
1st Stage (2 Stage Only)	—	—	—	150,000
Heating Output (Btuh)	73,000	97,000	97,000	166,000
1st Stage (2 Stage Only)	—	—	—	122,000
AFUE %[4]	81.0	81.0	81.0	81.0
Steady State Efficiency (%)[4]	81.0	81.0	81.0	81.0
No. Burners	1	1	1	1
No. Stages	1	1	1	2
Gas Connection Pipe Size (in.)	1/2	1/2	1/2	1/2
Compressor				
No./Type	1/Climatuff®		1/Climatuff	
Sound Rating (BELS)[5]	8.2		8.2	
Outdoor Coil - Type	Hi-Performance		Hi-Performance	
Tube Size (in.) OD	0.375		0.375	
Face Area (sq ft)	12.09		11.32	
Rows/FPI	2/16		2/16	
Indoor Coil - Type	Hi-Performance		Hi-Performance	
Tube Size (in.)	0.375		0.375	
Face Area (sq ft)	7.00		7.88	
Rows/FPI	3/15		3/15	
Refrigerant Control	Short Orifice		Short Orifice	
Drain Connection No./Size (in.)	1/3/4 PVC		1/ 3/4 PVC	
Outdoor Fan - Type	Propeller		Propeller	
No. Used/Diameter (in.)	1/24		1/24	
Drive Type/No. Speeds	Direct/1		Direct/1	
CFM	4,150		4,100	
No. Motors/HP	1/.25		1/.25	
Motor RPM	850		850	
Indoor Fan - Type	FC Centrifugal		FC Centrifugal	
No. Used/Diameter (in.)	1/12 x 9		1/ 12 x 9	
Drive Type/No. Speeds	Direct/2		BELT/1	
No. Motors	1		1	
Motor HP (Standard/Oversized)	.60/.75		1.0/2.0	
Motor RPM (Standard/Oversized)	850/1040		1725/1725	
Motor Frame Size (Standard/Oversized)	48/48		56/56	
Filters - Type	Throwaway		Throwaway	
Furnished?	Yes		Yes	
(No.) Size Recommended	(3)16 X 25 X 1		(3)16 X 25 X 1	
Refrigerant Charge (Lbs of R-22)[6]	10.20		10.00	

NOTES:

1. Cooling Performance is rated at 95 F ambient, 80 F entering dry bulb, 67 F entering wet bulb. Gross capacity does not include the effect of fan motor heat. ARI capacity is net and includes the effect of fan motor heat. Rated in accordance with ARI Standard 210/240 or 360
2. EER and SEER are rated at ARI conditions and in accordance with DOE test procedures.
3. Heating Performance limit settings and rating data were established and approved under laboratory test conditions using American National Standards Institute standards. Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level.
4. AFUE and Steady State Efficiency is rated in accordance with DOE test procedures.
5. Sound Rating is rated in accordance with ARI Standard 270 or 370.
6. Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

*Indicates both downflow and horizontal units.

Table 15-1 General Data

	3 Ton Downflow Units YC*037C3,C4		4 Ton Downflow and Horizontal Units YC*049C3,C4	
Cooling Performance[1]				
Gross Cooling Capacity	42,400		51,400	
SEER[2]	12.00		12.00	
Nominal CFM / ARI Rated CFM	1,200 / 1,200		1,600/1,600	
ARI Net Cooling Capacity	41,000		49,500	
System Power (KW)	3.78		4.61	
Heating Performance[3]				
Heating Models	Low	High	Low	High
Heating Input (Btuh)	80,000	120,000	90,000	120,000
Heating Output (Btuh)	65,000	97,000	73,000	97,000
AFUE %[4]	81.0	81.0	81.0	81.0
Steady State Efficiency (%)	81.0	81.0	81.0	81.0
No. Burners	1	1	1	1
No. Stages	1	1	1	1
Gas Connection Pipe Size (in.)	1/2	1/2	1/2	1/2
Compressor				
No./Type	1/Climatuff®		1/Climatuff	
Sound Rating (BELS)[5]	8.2		8.2	
Outdoor Coil - Type	Hi-Performance		Hi-Performance	
Tube Size (in.) OD	0.375		0.375	
Face Area (sq ft)	11.32		11.32	
Rows/FPI	2/16		2/16	
Indoor Coil - Type	Hi-Performance		Hi-Performance	
Tube Size (in.)	0.375		0.375	
Face Area (sq ft)	6.33		6.33	
Rows/FPI	2/15		3/15	
Refrigerant Control	Short Orifice		Short Orifice	
Drain Connection No./Size (in.)	1/3/4-PVC		1/ 3/4 PVC	
Outdoor Fan - Type	Propeller		Propeller	
No. Used/Diameter (in.)	1/24		1/24	
Drive Type/No. Speeds	Direct/1		Direct/1	
CFM	4,100		4,100	
No. Motors/HP	1/.25		1/.25	
Motor RPM	850		850	
Indoor Fan - Type	FC Centrifugal		FC Centrifugal	
No. Used/Diameter (in.)	1/9 x 9		1/ 12 x 9	
Drive Type/No. Speeds	Direct/2		Direct/2	
No. Motors	1		1	
Motor HP (Standard/Oversized)	.33/.40		.50/.75	
Motor RPM (Standard/Oversized)	1075/1400		850/1040	
Motor Frame Size (Standard/Oversized)	48/48		48/48	
Filters - Type	Throwaway		Throwaway	
Furnished?	Yes		Yes	
(No.) Size Recommended	(2) 20 X 25 X 1		(2) 20 X 25 X 1	
Refrigerant Charge (Lbs of R-22)[6]	8.30		8.90	

NOTES:

1. Cooling Performance is rated at 95 F ambient, 80 F entering dry bulb, 67 F entering wet bulb. Gross capacity does not include the effect of fan motor heat. ARI capacity is net and includes the effect of fan motor heat. Rated in accordance with ARI Standard 210/240 or 360
2. SEER are rated at ARI conditions and in accordance with DOE test procedures.
3. Heating Performance limit settings and rating data were established and approved under laboratory test conditions using American National Standards Institute standards. Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level.
4. AFUE and Steady State Efficiency is rated in accordance with DOE test procedures.
5. Sound Rating is rated in accordance with ARI Standard 270 or 370.
6. Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

*Indicates both downflow and horizontal units.

PURCHASE ORDER REQUISITION
LODI UNIFIED SCHOOL DISTRICT

Budget approved
P.O. #
2/8/01

Suggested Suppliers:
L&H Airco
1376 Lead Hill Blvd, Ste 100
Roseville, Ca. 95661

Ship To:
Lodi Unified School District
Maintenance & Operations
31 North Pacific Avenue
Lodi, CA 95242

Batch No. ____ FOB: D or S Vendor No. ____ MARK FOR: _____

Account Code _____ _____

Qty.	Description	Catalog No.	Unit Price	Extension
3	Executive controller w/ base plate	EC-7	$2,995.00	$8,985.00
	8 Inputs & 8 Outputs, HOA switches,			
	key pad and modem			
2	Input/Output module w/ base plate, display	IOM-2	$1,236.00	$2,472.00
	and HOA switches			
			SUBTOTAL	$11,457.00
			SHIPPING	
			TAX 7.75%	
			TOTAL	$11,457.00

APPROVED BY: Mike Matranga

Principal _____ Date _____
Program Administrator _____ Date _____
Director of Purchasing _____ Date _____

PURCHASE ORDER REQUISITION
LODI UNIFIED SCHOOL DISTRICT

Budget approved
P.O. #
2/9/01

Suggested Suppliers:
Control Co
271 Opportunity St. Unit 1
Sacramento, Ca.

Ship To:
Lodi Unified School District
Maintenance & Operations
31 North Pacific Avenue
Lodi, CA 95242

Batch No. ____ FOB: D or S Vendor No. ____ MARK FOR: _____

Account Code _____ _____

Qty.	Description	Catalog No.	Unit Price	Extension
2	Functional Devices Transmitter	CTME	$171.60	$343.20
3	Functional devices Responder	RC41C/A	$130.67	$392.01
			SUBTOTAL	$735.21
			SHIPPING	
			TAX 7.75%	
			TOTAL	$735.21

APPROVED BY: Mike Matranga

Principal _____ Date _____
Program Administrator _____ Date _____
Director of Purchasing _____ Date _____

RESOLUTION NO. 2001-42

A RESOLUTION OF THE LODI CITY COUNCIL AUTHORIZING THE CITY MANAGER TO PROVIDE A PUBLIC BENEFITS PROGRAM GRANT – DEMAND-SIDE MANAGEMENT PROJECT TO LODI UNIFIED SCHOOL DISTRICT

==========

WHEREAS, the State has mandated that beginning January 1, 1998, the City of Lodi is obligated to fund various programs through a Public Benefits Charge (PBC) based on a historical electric revenue requirement; and

WHEREAS, the requirement amounts to approximately $1 Million per year that must be dedicated to qualifying programs such as energy efficiency. A further stipulation is that these efforts must be done on the customer's side of the meter in order to qualify; and

WHEREAS, the Electric Utility Department recommends that the City provide a Public Benefits grant in the amount of $26,278.93 to fund a two-part demand-side management or energy efficiency improvement project as follows:

Phase One (already complete) included: The installation of 36 high efficiency (12.0 Seasonal Energy Efficiency Rating or SEER) air conditioning and heating units at two school sites within the City limits of Lodi (Tokay High School and Needham School); these 36 air conditioning and heating units replaced aging and inefficient equipment (all with energy efficiency ratings at 10.0 SEER or below).

Phase Two will include: The extension or enhancement of the existing energy management system (otherwise known as an EMS) from the Lodi Unified School District Maintenance & Operations Center to five school sites within the City limits of Lodi (Tokay High School, Lodi High School, Lakewood School, Heritage School and Vinewood School).

The extension of the energy management system to the additional school sites will allow Lodi Unified School District personnel to effectively and efficiently monitor and control air conditioning and heating systems from a remote location. This upgrade reduces operations and maintenance expenses, while reducing energy consumption (with the EMS upgrades, new controls will regulate and shut off heating and cooling systems not needed based upon classroom or facility occupancy/vacancy or use) at those various school locations. The installation of the aforementioned equipment-both heating/cooling units and the energy management systems- was/is to be performed by Lodi Unified School District personnel.

NOW, THEREFORE, BE IT RESOLVED, that the Lodi City Council hereby authorizes the City Manager to provide a Public Benefits Program Grant in the amount of $26,278.93 to Lodi Unified School District to fund a two-part demand-side management or energy efficiency improvement project as set out above.

Dated: February 21, 2001

==========

I hereby certify that Resolution No. 2001-42 was passed and adopted by the Lodi City Council in a regular meeting held February 21, 2001 by the following vote:

AYES: COUNCIL MEMBERS – Hitchcock, Howard, Land, Pennino and Mayor Nakanishi

NOES: COUNCIL MEMBERS – None

ABSENT: COUNCIL MEMBERS – None

ABSTAIN: COUNCIL MEMBERS – None

Susan J. Blackston

SUSAN J. BLACKSTON
City Clerk